SMART SECURITY SYSTEM

A COURSE PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this mini project report "**SMART SECURITY SYSTEM** " is the bonafide work of **SHAMRINA KARIMUN ABDUL (RA2011003010367), LALITA LOCHANA GB (RA2011003010366), AMITHA SANKA (RA2011003010368),**

and **ARAVIND K ANOOP (RA2011003010374)**

who carried out the project work under my supervision.

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Smart Security System

Abstract/Project Scope

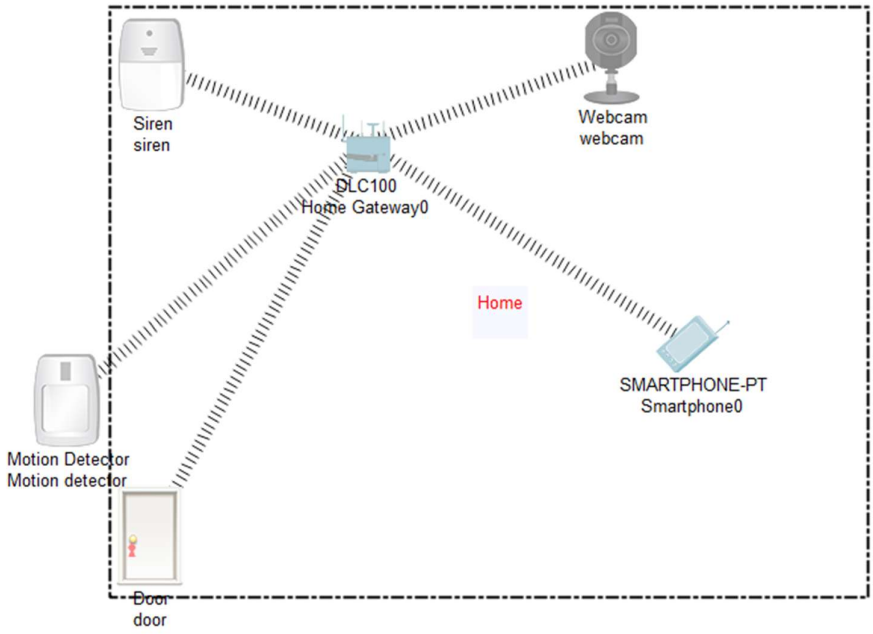
This report describes the network design of smart security system. In this network topology the home gateway, door, webcam, smart phone, motion detector, siren alarm are the devices that are connected in wireless media.

Establishing a system which is aimed at providing safety and reduce exposure to common hazards and alert as soon as they occur, we have used Cisco Packet Tracer for designing the network topology. It's general design which can be implemented at any higher level to provide secured system.

Network Requirements

In Smart Security Network topology, we have Home Gateway, Motion Detector, Door, Webcam, Siren alarm and smart phone. There is a data flow between the devices within the home system. Our network requirements include End devices and Wireless devices.

Architecture/Design



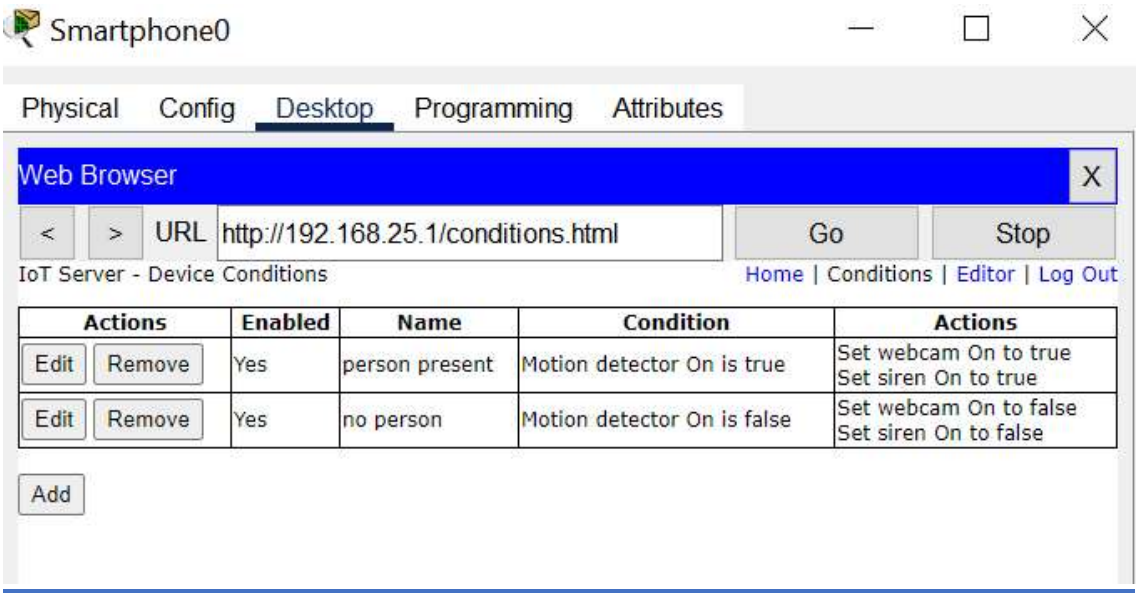
Implementation

- Home Gateway have 4 Ethernet ports in addition to a wireless access point configured with the "Home Gateway" SSID (see fig 2). To secure wireless connection WEP / WPA-PSK / WPA2 enterprise can be configured on home gateway.

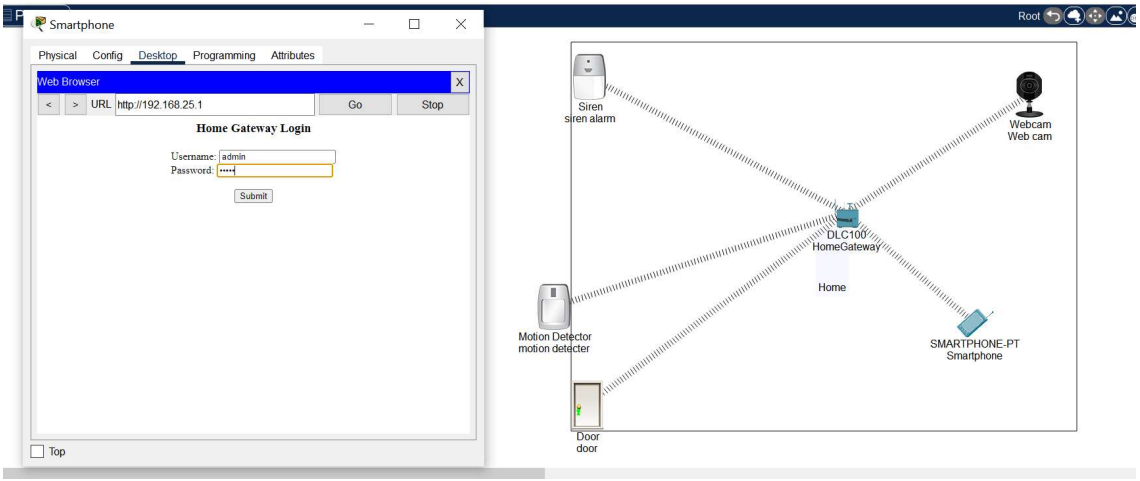
- The Home Gateway internal (LAN) IP address is 192.168.25.1 but it can also be accessed through its Internet facing IP address
- Home gateway also works as DHCP server by assigning IP address to each smart device that connected to it.

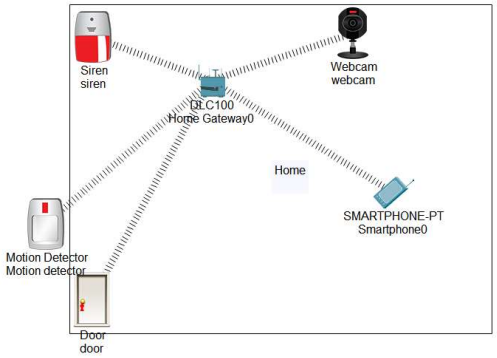
Security Actions

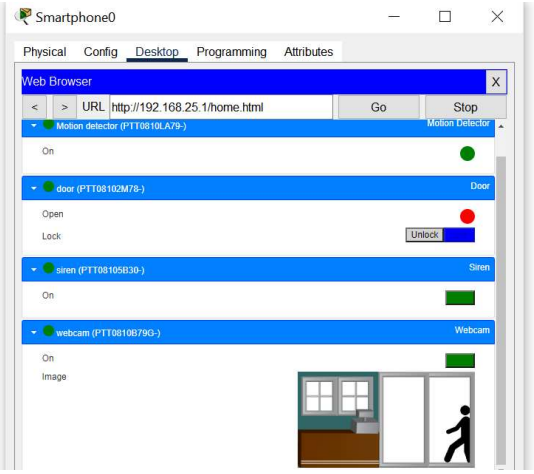
- When a person appears in front of the door. Motion detector is switched on and then webcam and siren are set to action
- When no person appears in front of the door the motion detector is not switched on also the webcam and siren are put switched off

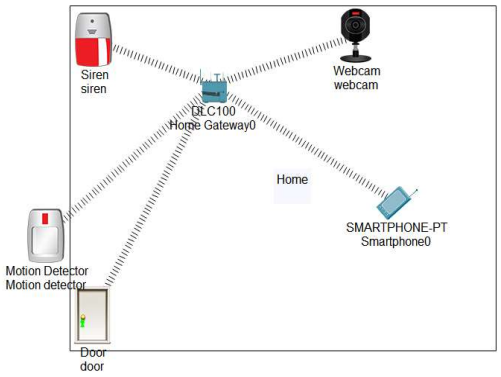


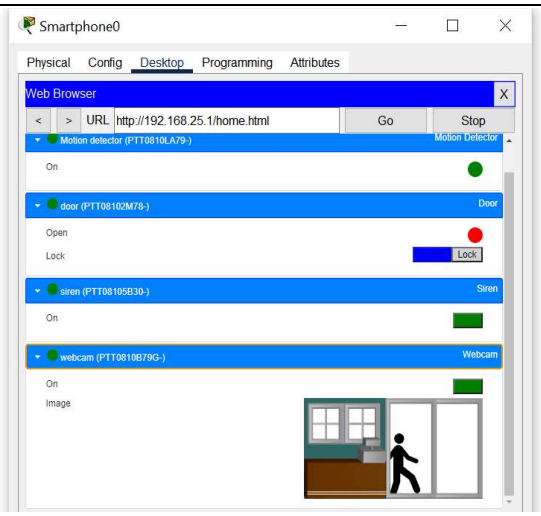
Demonstration







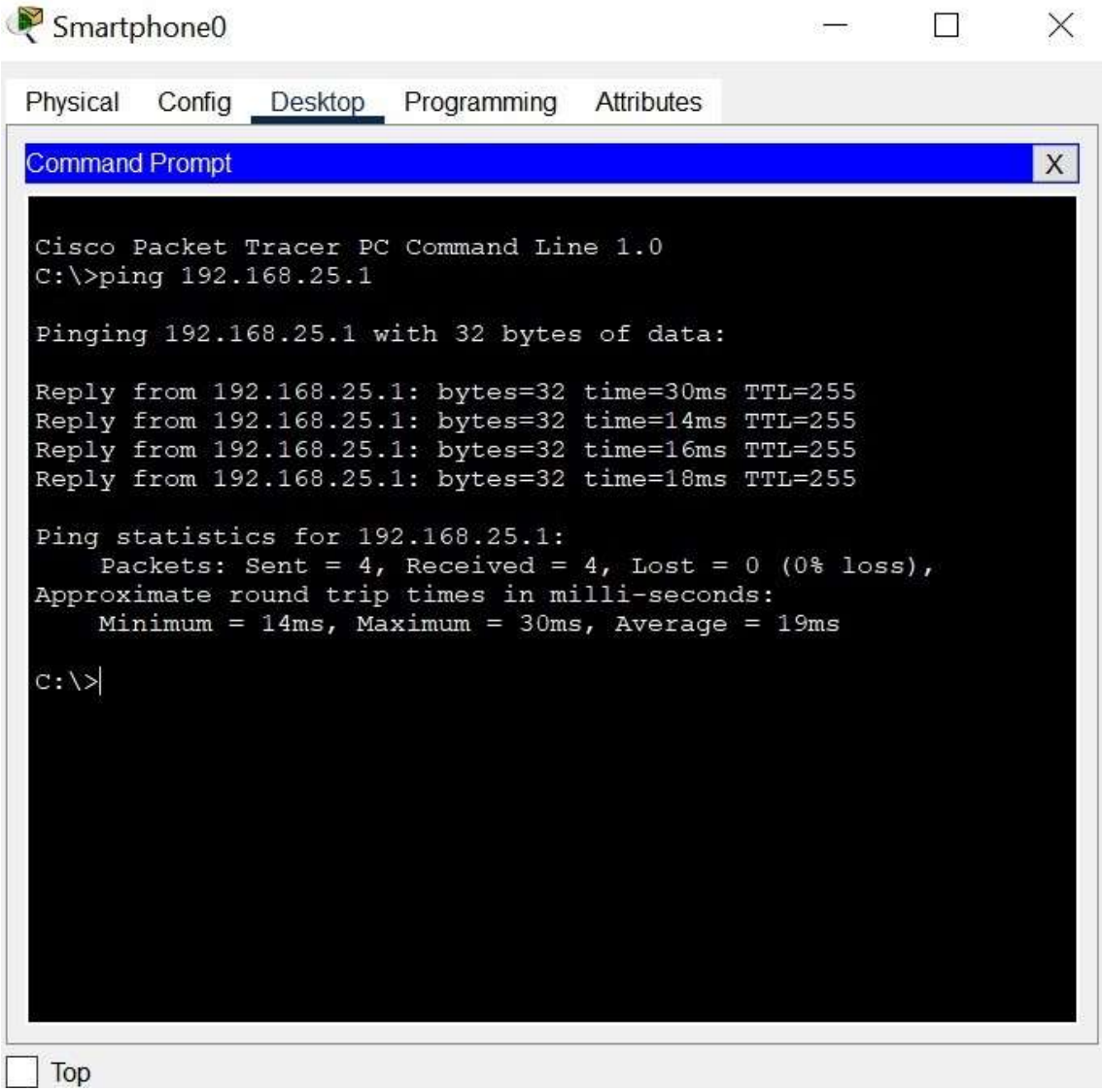




Results and Discussion:

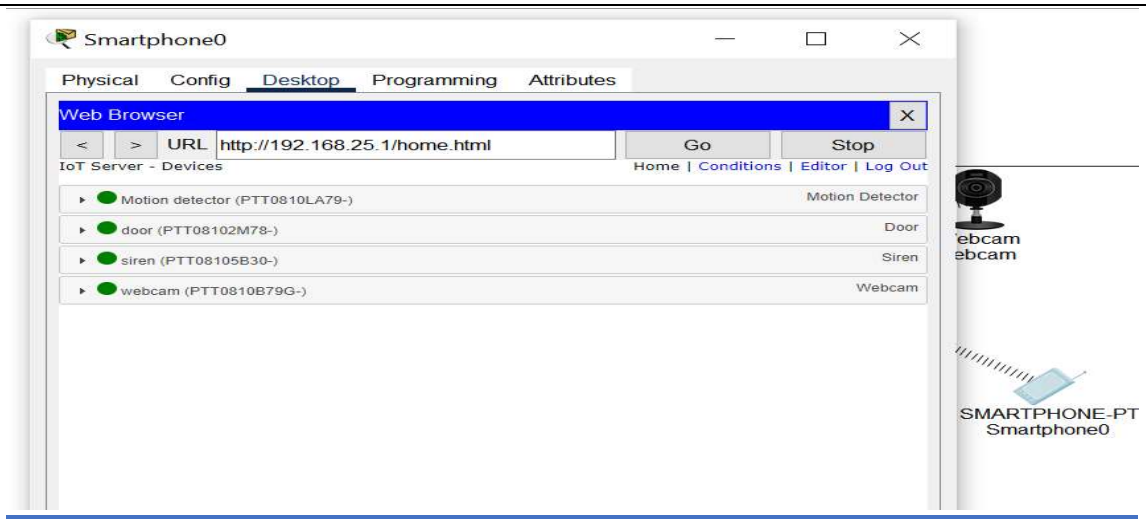
Connection Check:

The network connections were checked by ping requests:



HTTPS Check:

The server access was checked with HTTPS by using a browser:



Conclusion

Hence, the smart security is constructed successfully using cisco packet tracer, where you can identify who tries to enter your restricted area and gives you the flexibility to have the control of permitting them in or out.

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